

AMENDMENTSIn the Claims

1-17. (Cancelled)

18. **(Currently Amended)** A method comprising:
- identifying a plurality of nodes of a network, wherein
- said plurality of nodes are interconnected by one or more links;
- executing one or more tasks within each of said plurality of nodes of said network,
- wherein said executing comprises
- requesting, from at least one other node of said plurality of nodes, a format of data transmitted over a link of said one or more links attached to said at least one other node of said plurality of nodes,**
- generating first data identifying at least one node of said plurality of nodes at which at least one of
- inserted data is added, wherein
- said inserted data is associated with said each of said plurality of nodes, and
- dropped data is dropped, wherein
- said dropped data is associated with said each of said plurality of nodes, **and**
- generating second data indicating a format of in-transit data transmitted over said one or more links, **and**
- requesting, from at least one other node of said plurality of nodes, a format of data transmitted over a link of said one or more links attached to said at least one other node of said plurality of nodes;**
- identifying a destination node of said in-transit data; and
- transmitting said in-transit data to said destination node using said first data and said second data.

19.-20. (Cancelled)

21. (Previously Presented) The method of claim 18, wherein
said inserted data comprises data received by said each of said plurality of nodes from
said network, and
said dropped data comprises data transmitted from said each of said plurality of nodes to
said network.
22. (Previously Presented) The method of claim 18, wherein said executing comprises
requesting at least one of
said inserted data from said node of said plurality of nodes at which said inserted data is
added; and
said dropped data from said node of said plurality of nodes at which said dropped data is
dropped.
23. (Cancelled)
24. (Previously Presented) The method of claim 18, wherein said requesting
comprises:
requesting at least one of a synchronous transport signal type and a synchronous transport
module type.
25. (Previously Presented) The method of claim 18, wherein
said network satisfies at least one of a first condition and a second condition, wherein
said first condition is a failure, and in a case of said first condition, said in-transit
data is switched from a failed link of said one or more links to a redundant
link of said one or more links, and
squelched, and
said second condition, wherein
said in-transit data is re-transmitted in data buckets to at least one
predetermined node of said plurality of nodes at regular intervals
of time.
26. (Previously Presented) The method of claim 25, wherein
said network satisfies said first condition, and
said executing one or more tasks within each of said plurality of nodes to generate said
first data comprises

preventing misconnection by performing squelching.

27. (Previously Presented) The method of claim 25, wherein said network satisfies said second condition, and said executing one or more tasks within each of said plurality of nodes to generate said first data comprises
for each data bucket, identifying at least one of
said plurality of nodes at which said inserted data is added via said each data bucket; and
said plurality of nodes at which said dropped data is dropped via said each data bucket.
28. (Previously Presented) The method of claim 18, further comprising:
detecting a failure on a first link of said one or more links, wherein
said in-transit data is communicated over said first link;
identifying a redundant link of said one or more links; and
switching traffic in response to said detecting by switching said in-transit data from said first link to said redundant link.
29. (Previously Presented) The method of claim 28, wherein said executing one or more tasks within each of said plurality of nodes comprises executing said one or more tasks within each of said plurality of nodes before said failure occurs.
30. (Currently Amended) An apparatus comprising:
means for identifying a plurality of nodes of a network, wherein
said plurality of nodes are interconnected by one or more links;

means for executing one or more tasks within each of said plurality of nodes, wherein
means for executing comprises

means for requesting, from at least one other node of said plurality of nodes, a format of data transmitted over a link of said one or more links attached to said at least one other node of said plurality of nodes,

means for generating first data identifying at least one node of said plurality of nodes at which at least one of
inserted data is added, wherein

said inserted data is associated with said each of said plurality of nodes, and

dropped data is dropped, wherein

said dropped data is associated with said each of said plurality of nodes, and

means for generating second data indicating a format of in-transit data transmitted over said one or more links, and

~~means for requesting, from at least one other node of said plurality of nodes, a format of data transmitted over a link of said one or more links attached to said at least one other node of said plurality of nodes, and~~

said inserted data and said dropped data comprise at least one of

data received by said each of said plurality of nodes from said network,
and

data transmitted by said each of said plurality of nodes to said network;

means for identifying a destination node of said in-transit data; and

means for transmitting said in-transit data to said destination node using said first data
and said second data.

31. (Cancelled)

32. (Previously Presented) The apparatus of claim 30, wherein said means for executing comprises:
- means for requesting said inserted data from said node of said plurality of nodes at which said inserted data is added; and
 - means for requesting said dropped data from said node of said plurality of nodes at which said dropped data is dropped.
33. (Cancelled)
34. (Previously Presented) The apparatus of claim 30, wherein said means for requesting comprises:
- means for requesting at least one of a synchronous transport signal type and a synchronous transport module type.
35. (Previously Presented) The apparatus of claim 30, wherein said network satisfies at least one of a first condition and a second condition, wherein said first condition is a failure, and in a case of said first condition, said in-transit data is
- switched from a failed link of said one or more links to a redundant link of said one or more links, and
 - squelched, and
- said second condition, wherein
- said in-transit data is re-transmitted in data buckets to at least one predetermined node of said plurality of nodes at regular intervals of time.
36. (Previously Presented) The apparatus of claim 35, wherein said means for generating said first data comprises
- means for preventing misconnection comprising means for performing squelching, if said network satisfies said first condition.
37. (Previously Presented) The apparatus of claim 35, wherein said means for generating said first data comprises means for identifying, for each data bucket, at least one of

at least one of said plurality of nodes at which said inserted data is added via said
each data bucket, and

at least one of said plurality of nodes at which said dropped data is dropped via
said each data bucket.

38. (Previously Presented) The apparatus of claim 30, further comprising:
means for detecting a failure on a first link of said one or more links, wherein
said in-transit data is communicated over said first link;
means for identifying a redundant link of said one or more links; and
means for switching traffic in response to said detecting by switching said in-transit data
from said first link to said redundant link.
39. (Previously Presented) The apparatus of claim 38, wherein said means for
executing one or more tasks within each of said plurality of nodes comprises means for
executing said one or more tasks within each of said plurality of nodes before said failure occurs.
40. (Currently Amended) A network node comprising:
an interface, wherein
said interface is configured to couple said network node to a network,
said network comprises a plurality of nodes interconnected by one or more links,
and
said plurality of nodes comprises said network node; and
a timing communications and control processor configured to
identify said plurality of nodes,
execute one or more tasks within network node, wherein
said timing communications and control processor is configured to
perform said execution by virtue of being configured to
request, from at least one other node of said plurality of nodes,
a format of data transmitted over a link of said one or
more links attached to said at least one other node of
said plurality of nodes,
generate first data identifying at least one node of said plurality of
nodes at which at least one of
inserted data is added, wherein

said inserted data is data associated with said each
of said plurality of nodes, and
dropped data is dropped, wherein
said dropped data is data associated with said each
of said plurality of nodes, and
generate second data indicating a format of in-transit data
transmitted over said one or more links, and
~~request, from at least one other node of said plurality of nodes,
a format of data transmitted over a link of said one or
more links attached to said at least one other node of
said plurality of nodes, and~~
said inserted data and said dropped data comprise at least one of
data received by said each of said plurality of nodes from said
network, and
data transmitted by said each of said plurality of nodes to said
network,
identify a destination node of said in-transit data, and
communicate said in-transit data to said destination node using said first data and
said second data.

41. (Cancelled)

42. (Previously Presented) The network node of claim 40, wherein said timing
communications and control processor is further configured to:

request, from at least one other node of said plurality of nodes, said inserted data from
said node of said plurality of nodes at which said inserted data is added and said
dropped data from said node of said plurality of nodes at which said dropped data
is dropped.

43. (Cancelled)

44. (Currently Amended) A machine-readable storage medium having a plurality of
instructions executable by a machine embodied therein, wherein said plurality of instructions
when executed are configured to cause said machine to perform a method comprising:
identifying a plurality of nodes of a network, wherein

said plurality of nodes are interconnected by one or more links;
executing one or more tasks within each of said plurality of nodes to

request, from at least one other node of said plurality of nodes, a format of
data transmitted over a link of said one or more links attached to said
at least one other node of said plurality of nodes,

generate first data identifying at least one node of said plurality of nodes at which
at least one of

inserted data is added, wherein

said inserted data is associated with said each of said plurality of
nodes, and

dropped data is dropped, wherein

said dropped data is associated with said each of said plurality of
nodes, **and**

generate second data indicating a format of in-transit data transmitted over said
one or more links, **and**

request, from at least one other node of said plurality of nodes, a format of
data transmitted over a link of said one or more links attached to said
at least one other node of said plurality of nodes;

identifying a destination node of said in-transit data; and

communicating said in-transit data to said destination node using said first data and said
second data.

45. (Previously Presented) The machine-readable storage medium of claim 44,
wherein said inserted data and said dropped data comprises at least one of, data received by said
each of said plurality of nodes from said network, and data transmitted by said each of said
plurality of nodes to said network.

46. (Previously Presented) The machine-readable storage medium of claim 45,
wherein said executing comprises:

requesting, from at least one other node of said plurality of nodes, said inserted data from
said node of said plurality of nodes at which said inserted data is added and said
dropped data from said node of said plurality of nodes at which said dropped data
is dropped.

47. (Cancelled)